

OCT 02 2007

USSN: 10/762,304

Art unit: 3673

Examiner: Lagman, Frederick Lyndon

Amendments to the claims:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method of construction, comprising the steps of:
forming a volume of loose granular material in a base soil;
injecting a polymeric resin into the volume of loose granular material, the polymeric resin being an expanding polymeric resin and permeating the volume of loose granular material upon injection into the loose granular material; and
allowing the polymeric resin to cure and bind the loose granular material together [[and]] to form a structural support within the base soil, the structural support being formed of a contiguous mass of granular material permeated by polymeric resin.
2. (Original) The method of claim 1 in which forming a volume of loose granular material comprises:
forming a hole in the base soil; and
placing loose granular material in the hole.
3. (Original) The method of claim 2 in which injecting a polymeric resin into the volume of loose granular material comprises:
inserting a probe into the hole and injecting polymeric resin into the bottom of the hole using the probe.
4. (Original) The method of claim 3 in which injecting polymeric resin into the hole comprises removing the probe from the hole while injecting polymeric resin.
5. (Original) The method of claim 1 in which forming a volume of loose granular material comprises:

USSN: 10/762,304

Art unit: 3673

Examiner: Lagman, Frederick Lyndon

agitating a granular base soil.

6. (Original) The method of claim 5 in which injecting a polymeric resin into the volume of loose granular material comprises:
inserting a probe into the volume of agitated granular base soil and injecting polymeric resin through the probe.
7. (Currently amended) The method of claim 6 in which injecting polymeric resin into the hole comprises removing the ~~probe~~ probe from the volume of agitated granular base soil while injecting polymeric resin.
9. (Original) The method of claim 1 in which the base soil is a permafrost soil.
10. (Currently Amended) The method of claim 1 in which the polymeric resin expands upon ~~being injection into the loose granular material to encapsulate the loose granular material.~~
11. (Original) The method of claim 1 in which the granular material comprises one or more of silt, sand, gravel, rock fragments or construction rubble.
12. (Original) The method of claim 1 in which the granular material comprises a synthetic material.
13. (Currently Amended) The method of ~~claims~~ claim 1 in which the polymeric resin is a two part hydro - insensitive expanding polymeric resin.
14. (Original) A construction pile formed by the method of claim 1.
15. (Original) A construction barrier formed by application of the method of claim 1 at plural locations adjacent to each other in a base soil.

USSN: 10/762,304

Art unit: 3673

Examiner: Lagman, Frederick Lyndon

16. (Currently amended) A method of construction, comprising the steps of: excavating to predetermined depth ~~a hole~~ an excavation by drilling or other conventional excavation techniques; and placing an injection probe or probes into the excavation; and back-filling the excavation with granular material formed of pre-determined sized crushed rock or gravel; and injecting the back-filled material with a polymeric resin, the polymeric resin being an expanding polymeric resin, whereby upon curing, the polymeric resin and granular material forms a structural friction pile.
17. (Original) The method of claim 16 in which the friction pile supports a foundation be it pile and beam construction or concrete slab-on-grade.
18. (Original) The method of claim 16 in which vertical support structures are constructed in perma frost or ice lenses.
19. (Original) The method of claim 16 in which the polymeric resin is a two part hydro-insensitive expanding polymeric resin.
20. (Currently amended) A method of construction, comprising the steps of agitating a base soil; placing an injection probe or probes into the agitated base soil; and injecting the agitated soils with a polymeric resin, the polymeric resin being an expanding polymeric resin, whereby upon curing, the expanding polymeric resin and agitated granular material forms a structural friction pile.
21. (Original) The method of claim 20 in which the expanding polymeric resin is a closed cell, hydro-insensitive two part polymer resin injected into the agitated base soils.
22. (Original) The method of claim 20 in which agitating the base soils is accomplished by mechanical-vibratory drilling and/or hydraulic means and/or pneumatic means and/or sound

USSN: 10/762,304

Art unit: 3673

Examiner: Lagman, Frederick Lyndon

waves and/or any other means that may now or later be developed which will agitate and break up base soils.

23. (Original) The method of claim 16 repeated to form a pre-determined and patterned array of friction piles that forms a structural barrier similar to sheet piles.